

Appl. No. 10/668,819

Amdt. Dated April 28, 2005

Response to Office Action dated April 8, 2005

REMARKS

This is a full and timely response to the final Office action mailed April 8, 2005. Reexamination and reconsideration in view of the foregoing amendments and following remarks is respectfully solicited.

Claims 1-20 remain pending in this application, with Claims 1, 11, and 17 being the independent claims. Claims 2, 3, 8, 12, 13, and 16 have been amended to clarify the invention and claims 18, 19, and 20 have been amended to correct minor editorial errors. These amendments do not warrant further search and are submitted to place the rejected claims into a better form for consideration on appeal. No new matter is believed to have been added.

Objections to the Drawings

The drawings were objected to under 37 CFR 1.83(a). The Office Action alleges that the "coupled" feature set forth in claims 2 and 12 and the subject matter set forth in claim 9 are not shown in the figures.

The Applicants have amended claims 2 and 12 to now recite, *inter alia*, a backup ring disposed at least partially within the seal gland along with the seal. This is clearly shown at least in FIG. 6.

Additionally, the Applicants have submitted a new drawing sheet (FIG. 8) depicting the features recited in claim 9. The new drawing sheet has been labeled as a "New Sheet" and shows a valve assembly, wherein the segment seal main body opening is in fluid communication with the valve body inlet when the plug is in the closed position, as recited in claim 9. Hence, no new matter has been added. The Applicants have amended the specification to add a new paragraph that describes the features shown in the new drawing sheet and recited in claim 9.

Based on the above, the Applicants submit that the drawings are now acceptable. Accordingly, withdrawal of these objections to the drawings is respectfully requested.

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Objections to the Specification/Disclosure

The Office Action objected to the specification for allegedly failing to provide proper antecedent basis for the subject matter claimed in claims 2 and 12 and 8 and 16.

As mentioned above, the Applicants have amended claims 2 and 12 to now each recite, *inter alia*, a backup ring disposed at least partially within the seal gland along with the seal. Besides being clearly shown in FIG. 6, support for this change may be found in the second to last sentence of paragraph [0023], which states, "In yet another alternative configuration, a close-up view of which is shown in FIG. 6, a back-up ring 602 may be disposed within the seal glad 404 along with the seal 406, to prevent the seal 406 from extruding from the seal glad 404 when the valve assembly 100 is used in relatively high pressure applications."

Claims 8 and 16 have been amended to now recite, *inter alia*, wherein the segment seal main body is biased away from the plug outer surface. This feature is disclosed in FIG. 2 and in the fourth and sixth lines of paragraph [0021], which state, "A spring element 416 is shown disposed in the cavity 414, which biases the segment seal assembly 106 toward the fluid outlet 110 when the valve assembly 100 is in the closed position," and "As will be discussed below, the segment seal assembly 106, in some embodiments, could be implemented without the spring element 416."

Claims 3 and 13, which each recites the spring element, have been amended to now depend from claims 8 and 16, respectively.

Based on the above, the Applicants respectfully request withdrawal of these objections to the specification.

Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 1-20 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter that was not adequately described in the specification. In particular, the Office action alleges that the recitation that the "sealed vent region has a cross sectional area that is less than the defined cross sectional flow area," which is found in each of independent Claims 1, 11, and 17, is not disclosed. Applicant respectfully traverses this rejection.

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It is well-settled that the written description requirement is met if an applicant conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the claimed invention. Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). Moreover, the test of sufficient support is whether the disclosure readily conveys to a person of ordinary skill in the art that the applicant invented the claimed subject matter. In re Gosteli, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989).

Clearly, the specific subject matter of Claims 1, 11, and 17 that the Office action alludes to is adequately described in the specification. One need only look to paragraph [0022], lines 7-12, and FIG. 2, to see that this specific feature is disclosed. As such, this particular claim feature is disclosed and Claims 1-20 do meet the written description requirement.

In addition to the above, the Office action appears to take issue with the discussion in paragraph [0022], lines 12-16, and paragraph [0026], lines 1-3, of the specification. It appears from this portion of the Office action, that the Examiner actually intended to perhaps make an enablement rejection under 35 U.S.C. § 112, first paragraph, since the line of argument seemingly alleges that what is described is not physically possible. Yet, what this has to do with this particular claimed subject matter is superfluous. Claimed subject matter is enabled if any person skilled in the art can, based on the disclosure, make and use the invention without undue experimentation. In re Wands, 858 F.2d at 737, 8 USPQ2d at 1404 (Fed. Cir. 1988). Clearly, a person of less than ordinary skill in the art, let alone an ordinarily skilled artisan, can pick up the instant application and make and use the claimed invention.

In view of the foregoing, Applicant submits that the rejection under 35 U.S.C. § 112, first paragraph is unfounded and should be withdrawn.

Before proceeding further, Applicant does feel compelled to address the Examiner's concern with the passages in paragraphs [0022] and [0026]. In particular, on page 4 of the Office action, the Examiner states that if the cross sectional flow area (210) of the valve body outlet (110) were significantly larger than the cross sectional area (208) of the vent region (418), then there would not be any reduction in differential pressure

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load across the segment seal, and it would instead be increased. The Examiner further alleges that the valve body outlet (110) has no pressure relative to an inlet.

What the Examiner means by the last statement is unclear. Moreover, the undersigned cannot discern what relevance this statement has to the claimed invention. As regards the relative sizes of the valve body outlet and vent region cross sectional flow areas, it is unclear what relevance this has, too. Although the Examiner may disagree with a particular result that is delineated in the application, this does not render the claimed invention either not fully described or fully enabled. Indeed, whether the Examiner agrees that providing a vent region having a cross sectional area that is less than the cross sectional flow area of the outlet provides the described resultant net force has no bearing whatsoever on whether the claimed structure can be made and used.

Nonetheless, the fact of the matter is, because the vent region (418) is in fluid communication with the valve outlet (110), the pressure between the two regions will be equal. However, the pressures acting on the surface areas of these two regions are not the only forces being applied to the segment seal assembly main body (402) to provide the resultant net force. First, fluid leaks around the plug (104) and into the recess (204) between the segment seal main body and the plug outer surface. However, the seal (406) keeps this fluid from entering the vent region (418). The pressure from this fluid supplies a force that acts to push the segment seal main body (402) toward the outlet (110). Second, the spring (416) and/or the seal (406) also supply a force that acts to push the segment seal main body (402) toward the outlet (110). The forces due to fluid pressure on both sides of the segment seal assembly main body, together with the force supplied from the spring and/or the seal, supply the resultant net force.

Rejections Under 35 U.S.C. § 102

Claims 1-3 and 5-16 were rejected under 35 U.S.C. § 102 as allegedly being anticipated by U.S. Patent No. 2,506,097 (Melichar). This rejection is respectfully traversed.

Independent Claims 1 and 11 each recite that the sealed vent region has a cross sectional area that is less than the defined cross sectional flow area of either the valve

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body fluid inlet or outlet. Melichar, on the other hand, discloses a vent region cross sectional area that is, at a minimum, equal to the cross sectional flow area of the valve body fluid ports.

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the § 102 rejections.

Rejections Under 35 U.S.C. § 103

Claims 4 and 17-20 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Melichar, and U.S. Patent No. 3,479,006 (Brown). This rejection is respectfully traversed.

Independent Claim 17 additionally recites that the sealed vent region has a cross sectional area that is less than the defined cross sectional flow area of either the valve body fluid inlet or outlet. As was noted above, Melichar fails to disclose (or even remotely suggest) this feature. Moreover, Applicant further submits that Brown fails to disclose or even remotely suggest at least this feature. As such, the combination of Melichar and Brown fails to teach the subject matter of at least independent Claims 1, 11, and 17.

In view of the foregoing, reconsideration and withdrawal of the § 103 rejection is respectfully solicited.

Conclusion

Based on the above, independent Claims 1, 11, and 17 are patentable over the citations of record. The dependent claims are also submitted to be patentable for the reasons given above with respect to the independent claims and because each recite features which are patentable in its own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

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Hence, Applicant submits that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: 4/28/05

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Attachment: New Sheet FIG. 8